

Amendments to the Claims:

This listing of the claims replaces all prior versions of the claims in the application:

Listing of the claims:

1. (Withdrawn). A method of treating a patient that comprises or is at risk of comprising a cell that expresses hTERT, said method comprising administering to said patient a cytotoxic T lymphocyte that kills said cell in an hTERT specific, major histocompatibility complex-restricted fashion.
2. (Withdrawn). The method of claim 1, wherein said cytotoxic T lymphocyte is autologous to said patient.
3. (Withdrawn). The method of claim 1, wherein said cytotoxic T lymphocyte is allogeneic to said patient.
4. (Withdrawn). The method of claim 1, wherein said cytotoxic T lymphocyte is generated by activation with an antigen presenting cell that has been pulsed with hTERT or a peptide of hTERT that binds to a major histocompatibility complex molecule.
5. (Withdrawn). A method of treating a patient that comprises or is at risk of comprising a cell that expresses hTERT, said method comprising administering to said patient an antigen presenting cell that activates in said patient a cytotoxic T lymphocyte that kills said cell in an hTERT-specific, major histocompatibility complex-restricted fashion.
6. (Withdrawn). The method of claim 5, wherein said antigen presenting cell was pulsed with hTERT or a peptide of hTERT that binds to a major histocompatibility complex molecule.
7. (Withdrawn). A method of treating a patient that comprises or is at risk of comprising a cell that expresses hTERT, said method comprising administering to said patient hTERT or a peptide of hTERT that binds to a major histocompatibility complex molecule, wherein said hTERT or

said peptide of hTERT is processed by an antigen presenting cell in said patient, which activates a cytotoxic T lymphocyte in said patient to kill said cell that expresses hTERT in an hTERT-specific, major histocompatibility complex-restricted fashion.

8. (Withdrawn). The method of claim 7, wherein hTERT or said peptide of hTERT is administered to said patient in association with an adjuvant.

9. (Withdrawn). A method of treating a patient that comprises or is at risk of comprising a cell that expresses hTERT, said method comprising administering to said patient a nucleic acid molecule encoding hTERT or a peptide of hTERT that binds to a major histocompatibility complex molecule, wherein said nucleic acid molecule is expressed in said patient so that it can be processed by an antigen presenting cell in said patient, which activates a cytotoxic T lymphocyte in said patient to kill said cell that expresses hTERT in an hTERT specific, major histocompatibility complex-restricted fashion.

10. (Withdrawn). The method of claim 9, wherein said nucleic acid molecule encoding hTERT or a peptide of hTERT is in an expression vector.

11. (Withdrawn). The method of claim 1, 5, 7, or 9, wherein said patient comprises a tumor comprising cells that express hTERT.

12. (Withdrawn). The method of claim 4 or 5, wherein said antigen presenting cell is a dendritic cell or a CD40-activated B cell.

13. (Withdrawn). The method of claim 4,6,7, or 9, wherein said peptide of hTERT binds to a class I major histocompatibility complex molecule.

14. (Withdrawn). The method of claim 13, wherein said class I major histocompatibility complex molecule is an HLA-A2 molecule or an HLA-A3 molecule.

15. (Withdrawn). The method of claim 14, wherein said class I major histocompatibility complex molecule is an HLA-A2 molecule and said peptide of hTERT comprises the amino acid sequence of SEQ ID NO: 1, or said class I major histocompatibility complex molecule is an HLA-A3 molecule and said peptide of hTERT comprises the amino acid sequence of SEQ ID NO:2.

16. (Withdrawn). A method of assessing the level of immunity of a patient to hTERT or a peptide of hTERT that binds to a major histocompatibility complex molecule, said method comprising measuring the level of cytotoxic T lymphocytes specific for hTERT or said peptide of hTERT in a sample from said patient.

17. (Withdrawn). The method of claim 16, wherein said sample is obtained from said patient before or after a cancer treatment is administered to said patient.

18. (Currently amended). An isolated hTERT peptide ~~less than 514~~ 50 amino acids in length that binds to a human major histocompatibility complex class I A molecule, wherein said peptide comprises SEQ ID NO: 1.

19. (Previously presented). The peptide of claim 18, consisting of the amino acid sequence set forth in SEQ ID NO: 1.

20. (Withdrawn). An *ex vivo* generated cytotoxic T lymphocyte that specifically kills a cell expressing hTERT in a specific, major histocompatibility complex-restricted fashion.

21. (Withdrawn). An *ex vivo* generated antigen presenting cell that presents a peptide of a hTERT in the context of a major histocompatibility complex molecule.

22. (Withdrawn). A method for identifying a universal tumor associated antigen, said method comprising the steps of

- a) analyzing one or more databases to identify a gene that is:
 - i) expressed in more than one human tumor type, and

- ii) expressed in at least one human tumor type at a level that is at least 3-fold higher than the level at which it is expressed in a normal human cell;
 - b) using a computer-run algorithm to identify an amino acid sequence in the protein encoded by said gene that is predicted bind to a major histocompatibility complex molecule;
 - c) synthesizing an immunogen that comprises the amino acid sequence identified in step b), or a sequence that is predicted by a computer-run algorithm to bind to a major histocompatibility complex molecule with higher affinity than said sequence; and
 - d) testing the ability of said immunogen to stimulate a major histocompatibility complex-restricted cytotoxic T lymphocyte response that is specific for said protein.
23. (Withdrawn). The method of claim 22, further comprising, after step (d), testing the ability of a major histocompatibility complex-restricted cytotoxic T lymphocyte that is specific for said universal tumor associated antigen and is generated in step (d) to kill a malignant cell expressing said universal tumor associated antigen and not a non-malignant cell.
24. (Withdrawn). The method of claim 22, further comprising, after step (c) and prior to step (d), using a time-resolved, fluorometry-based assay to measure MHC binding and MHCI peptide complex stability of a peptide comprising the amino acid sequence identified in step (b).
25. (Withdrawn). The method of claim 22, wherein said major histocompatibility complex molecule is a class I or class II major histocompatibility molecule.
26. (Withdrawn). The method of claim 22, wherein said testing of said immunogen is carried out by contacting a cytotoxic T lymphocyte with an antigen presenting cell that has been pulsed with said immunogen.
27. (Withdrawn). The method of claim 26, wherein said antigen presenting cell is a dendritic cell or a CD40-activated B cell.

28. (Withdrawn). A method of treating a patient that comprises or is at risk of comprising a cell that expresses a universal tumor-associated antigen, said method comprising administering to said patient a cytotoxic T lymphocyte that kills said cell in an antigen-specific, major histocompatibility complex-restricted fashion.

29. (Withdrawn). The method of claim 28, wherein said cytotoxic T lymphocyte is autologous to said patient.

30. (Withdrawn). The method of claim 28, wherein said cytotoxic T lymphocyte is allogeneic to said patient.

31. (Withdrawn). The method of claim 28, wherein said cytotoxic T lymphocyte is generated by activation with an antigen presenting cell that has been pulsed with said universal tumor-associated antigen or a peptide thereof that binds to a major histocompatibility complex molecule.

32. (Withdrawn). A method of treating a patient that comprises or is at risk of comprising a cell that expresses a universal tumor-associated antigen, said method comprising administering to said patient an antigen presenting cell that activates in said patient a cytotoxic T lymphocyte that kills said cell in an antigen-specific, major histocompatibility complex-restricted fashion.

33. (Withdrawn). The method of claim 32, wherein said antigen presenting cell was pulsed with said universal tumor-associated antigen or a peptide thereof that binds to a major histocompatibility complex molecule.

34. (Withdrawn). A method of treating a patient that comprises or is at risk of comprising a cell that expresses a universal tumor-associated antigen, said method comprising administering to said patient said universal tumor-associated antigen or a peptide thereof that binds to a major histocompatibility complex molecule, wherein said antigen or said peptide thereof is processed by an antigen presenting cell in said patient, which activates a cytotoxic T lymphocyte in said

patient to kill said cell that expresses said antigen in an antigen-specific, major histocompatibility complex-restricted fashion.

35. (Withdrawn). The method of claim 34, wherein universal tumor-associated antigen or said peptide thereof is administered to said patient in association with an adjuvant.

36. (Withdrawn). A method of treating a patient that comprises or is at risk of comprising a cell that expresses a universal tumor-associated antigen, said method comprising administering to said patient a nucleic acid molecule encoding said antigen or a peptide thereof that binds to a major histocompatibility complex molecule, wherein said nucleic acid molecule is expressed in said patient so that it can be processed by an antigen presenting cell in said patient, which activates a cytotoxic T lymphocyte in said patient to kill said cell that expresses said antigen in an antigen-specific, major histocompatibility complex-restricted fashion.

37. (Withdrawn). The method of claim 36, wherein said nucleic acid molecule encoding said universal tumor-associated antigen or said peptide thereof is in an expression vector.

38. (Withdrawn). The method of claim 28, 32, 34, or 36, wherein said patient comprises a tumor comprising cells that express said universal tumor-associated antigen.

39. (Withdrawn). The method of claim 31 or 32, wherein said antigen presenting cell is a dendritic cell or a CD40-activated B cell.

40. (Withdrawn). The method of claim 31, 33, 34, or 36, wherein said peptide of said universal tumor-associated antigen binds to a class I major histocompatibility complex molecule.

41. (Withdrawn). The method of claim 40, wherein said class I major histocompatibility complex molecule is an HLA-A2 molecule or an HLA-A3 molecule.

42. (Withdrawn). A method of assessing the level of immunity of a patient to a universal tumor-associated antigen or a peptide thereof that binds to a major histocompatibility complex

APPLICANTS: Nadler, et al.
U.S.S.N.: 09/830,400

molecule, said method comprising measuring the level of cytotoxic T lymphocytes specific for said antigen or said peptide thereof in a sample from said patient.

43. (Withdrawn). The method of claim 42, wherein said sample is obtained from said patient before, during, after, or before and after a cancer treatment is administered to said patient.

44. (Canceled).

45. (Withdrawn). An *ex vivo* generated cytotoxic T lymphocyte that specifically kills a cell expressing a universal tumor-associated antigen in a specific, major histocompatibility complex-restricted fashion.

46. (Withdrawn). An *ex vivo* generated antigen presenting cell that presents a peptide of a universal tumor-associated antigen in the context of a major histocompatibility complex molecule.